Message

From: Wilson, Patrick [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=841477851C614E1981C54C0372591BFE-PWILSON]
Sent: 7/7/2017 11:01:05 PM
To: Wortham, Carol@DTSC [Carol.Wortham@dtsc.ca.gov]
Subject: RE: Analytical Methods (1668c) for Dioxin-like PCBs

Good Afternoon Carol,

Thanks for your message.

I'll do my best to try & track down that poster. These initial conversations took place several years ago – so I'm not entirely sure about its location - and our former colleague John Beach has since retired.

Let me see what I can do -

From: Wortham, Carol@DTSC [mailto:Carol.Wortham@dtsc.ca.gov]
Sent: Friday, July 7, 2017 3:55 PM
To: Wilson, Patrick <Wilson.Patrick@epa.gov>; Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>
Cc: Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>
Subject: RE: Analytical Methods (1668c) for Dioxin-like PCBs

Hello Patrick,

Is there any chance that we could get a copy of the poster mentioned below? An electronic version is fine.

Thank You,

Carol Wortham

Quality Management Officer
Environmental Chemistry Laboratory
(510) 540-3968

From: Wilson, Patrick [mailto:Wilson.Patrick@epa.gov]
Sent: Friday, July 07, 2017 3:49 PM
To: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>
Cc: Wortham, Carol@DTSC <Carol.Wortham@dtsc.ca.gov>; Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>
Subject: FW: Analytical Methods (1668c) for Dioxin-like PCBs

Good Afternoon CY,

I hope this message finds you doing well.

I wanted to follow up on the conversation that we initiated last week regarding EPA's analytical method (1668c) for compounds with dioxin-like activity. As we discussed, prior to working with you on the Riverside Ag Park PCB site, we engaged with EPA HQ regarding method 1668c and some potential methodological issues.

We were put in touch w/Charlie Appleby, who is a senior official in the Agency's program office responsible for analytical method development & verification. Have a look at the e-mail string below. This may be informative for your laboratory personnel. We can follow up & discuss in more detail should your laboratory staff have additional questions or concerns w/1668c.

Best Regards Cy

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United States Environmental Protection Agency

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From: Wilson, Patrick
Sent: Friday, October 23, 2015 5:25 PM
To: Appleby, Charlie <Appleby.Charlie@epa.gov>
Cc: Beach, John <Beach.John@epa.gov>; Baylor, Katherine <Baylor.Katherine@epa.gov>; Berg, Marlene <Berg.Marlene@epa.gov>; Plate, Mathew <Plate.Mathew@epa.gov>
Subject: RE: Analytical Methods for Dioxin-like PCBs

Hi Charles – Good Afternoon,

Thank you for agreeing to speak with us regarding a potential issue that one of our scientist here in the regional office has identified with the Agency's analytical approach with the PCB dioxin-like congeners – EPA Method 1668c. I wanted to provide you with a brief description of the issue we are confronting in anticipation of speaking with you directly.

Our division here in Region IX is responsible for characterizing & conducting risk-based cleanups for hazardous waste sites regulated under RCRA & TSCA. We have a number of PCB sites that we routinely characterize based upon their aroclor profile – & when those sites are contaminated with "weathered PCBs" – we have routinely submitted a small subset of samples for additional characterization for their dioxin-like or co-planar PCB congener content.

John Beach has been following the literature on PCB congener analysis & has noted that potential interference by highly chlorinated congeners in high concentrations can frequently lead to spurious findings. As you likely know, PCB 126 – because of its toxicity equivalence value – is often a "risk driver" when weathered PCBs impact various media (soils, biota, impacted building materials). John has identified some mass spectroscopic issues associated with its analysis which leads him to believe that our analytical method has the potential to significantly overestimate the concentration of PCB 126 identified in individual samples.

More specifically, the concern seems to resolve around the idea that when samples contain a high concentration mixture of congeners in addition to PCB 126 (128, 166 & 175) – the potential for overestimating the concentration of PCB 126 occurs because of a unique fragmentation pattern. Evidently, the loss of chlorine (Cl_2) or a single chloride ion (Cl^-) from congeners 128, 166 or 175 during ionization may interfere with the ability to accurately resolve the PCB 126 peak? This potentially results in an overestimation of the PCB 126 concentration in the sample?

Because many of our cleanup & permitting decisions under RCRA & TSCA are risk-based – this putative overestimation of congener 126 may result in risk management decisions that are unnecessarily conservative – essentially requiring more remedial actions (cleanup) or more restrictive permit conditions than would otherwise be required.

If possible - John & I would like to give you a call perhaps next week to discuss this issue & determine if you have any insights or advice. I will also copy/attach a pdf poster that highlights this potential ionization issue from John's investigations.

Thanks in-advance Charlie for any suggestions or insights you can share.

Kind Regards...

<< File: Hart 2008 Data Defrag poster.pdf >>

From: Appleby, Charlie
Sent: Friday, October 23, 2015 5:36 AM
To: Berg, Marlene <Berg.Marlene@epa.gov>; Wilson, Patrick <Wilson.Patrick@epa.gov>
Subject: RE: Analytical Methods for Dioxin-like PCBs

Marlene,

Thank you, I will be happy to assist.

Charlie Appleby
CLP Organic and NRAS Program Manager
Analytical Services Branch
OSWER/OSRTI/TIFSD
(703) 347-0266 (Potomac Yard)
(703) 405-0057 (Mobile)

From: Berg, Marlene
Sent: Thursday, October 22, 2015 5:38 PM
To: Wilson, Patrick <Wilson.Patrick@epa.gov>; Appleby, Charlie <Appleby.Charlie@epa.gov>
Subject: Analytical Methods for Dioxin-like PCBs

Hi Charlie,
I guess I have one more referral for you this week.

Patrick Wilson is a senior toxicologist in Region 9 with whom I have worked with over the years. He is looking for someone with technical expertise regarding analytical methods for dioxin-like PCB congeners. I am recommending that he contact you.

Marlene